

EMPOWERMENT OF COMMUNITIES AFFECTED BY DISASTERS LUMPUR LAPINDO THROUGH OPTIMIZING LAND USE YARD IN THE VILLAGE OF GLAGAHARUM PORONG, DISTRICT SIDOARJO, EAST JAVA

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ABSTRACT

Agricultural land before the overflow of the Lapindo mud disaster, became the main livelihood source for rural communities Glagaharum, district Porong, Sidoarjo. The land productivity is now no longer optimal, many people who switched professions to meet daily needs, because wetland could no longer be relied upon. The main program of the yard optimization of land use through integrated farming (organic vegetable and livestock), is expected to boost the economy by enabling integrated agricultural farming.

The goal of the program KKN PPM, among others: (1) increase participation, empathy, interaction and awareness of students UPN "Veteran" East Java in overcoming the problems of the affected community hot mud disaster lapindo especially in rural Glagaharum, district Porong, Sidoarjo district ,

Targets diantaranya: (1) Increased knowledge and skills on integrated farming community as a new alternative livelihood sources. (3) There was an interaction positive and significant benefits for college, community, supporting partners.

The method of implementation KKN PPM activities, beginning with field surveys and interviews to villagers Galagaharum on potential and existing problems in the local village. Of potential and existing problems, the planned programs to solve the problems of the local village. Implementation of programs KKN PPM will be performed by a team KKN-PPM.

Keywords: Lumpur Lapindo, empowerment, integrated farming.

PRELIMINARY

1. Potential featured / problems masyarakat

Hot mud flood in Sidoarjo known as Lapindo mudflow that occurred since May 29, 2006 led to tergenangnya residential areas, agriculture, industry in several districts, including in the area of Porong subdistrict. Among the environmental damage to the region stagnant including paddy fields, among others, sugarcane land area of 25.61 hectares and 172.39 hectares of rice land.

Commodity in the Porong subdistrict of Sidoarjo regency are vegetables, sugar cane, and rice area of more than 700 Ha is the source of livelihood of local communities. Since their outburst Lapindo mud, disrupted local economies. Agricultural land that used to be a source of livelihood can no longer be relied Lapindo mud due to seepage. So many people in the area bursts try to switch seek livelihood.

The profile of the target group and their potential / integrated agriculture development issues in the area of Porong subdistrict, are as follows:

- (A) The existence of farmer groups (Gapoktan) in each village, which has been institutionalized and actively participated in the Department of Agriculture, Plantation and Farm Sidoarjo.
- (B) Lack of knowledge and practice of integrated farming especially the cultivation of organic farming, fish farming catfish, and goats Etawa.

(C) The absence of a model of integrated farming (farm - cattle), which each utilize waste production.

(D) The absence of a marketing agency inputs and agricultural products, fisheries and livestock.

Expectations of the people around the area is the presence of other alternative than to rely on the land affected by the Lapindo mud as a source of livelihood. Based on the existing potential in the region, needs to be developed program Integrated Farming which one need their assistance to set up a Human Resources related to the increasing skills of organic farming, especially the cultivation of organic vegetables, herding goats Etawa, cultivation of seedlings / catfish, processing post-harvest and management of farming integrated farming is good.

2. The proposed Settlement issues

The creation of the Integrated Agricultural Region (farm-livestock-fish) into the expectations of the farmers and residents in Glagaharum village, Porong subdistrict. Besides food crops, vegetable crops, livestock and fisheries by utilizing their yards, giving a big share in empowering people affected by the Lapindo mud. However, issues that often arises is the limited knowledge and skills of the community and the availability of inputs are limited, expensive and labor costs are quite expensive.

3. Technology / policy / concept to be applied to solve problems

Based on the discussion above, it is in an effort to help boost the economy in the Porong subdistrict of Sidoarjo regency, some technologies / methods / concepts that will be implemented include:

- (1) Training of organic vegetable cultivation technology, goats Etawa, cultivation of seedlings / catfish.
- (2) Demonstration of integrated farming with goats integrate Etawa, organic vegetables and cultivation of seedlings / catfish.
- (3) Training post-harvest technologies include the processing of agricultural products (catfish), packaging of organic vegetables, in uapay increase the selling value.
- (4) Training of farm management and marketing of integrated agriculture-based

In the KKN PPM program implementation in the urban / rural Glagaharum Porong district is fully supported by the Department of Agriculture, Plantation and Farm Sidoarjo. And for the sustainability of program activities, according MoU between regency of Sidoarjo and UPN "Veteran" Java then Galagaharum Porong village area can be used as a guided village coachee Integrated Farming System Research Centre and Community Service (P4M) Faculty of Agriculture. Potential and existing problems in the local village. Of potential and existing problems, the planned programs to solve the problems of the local village. Implementation of programs KKN PPM will be performed by a team KKN-PPM.

TARGET AND OUTPUTS

National Development University "Veteran" East Java has been actively engaged in community service activities in Sidoarjo in the form of Real Work Lecture activity for 4 years (in 2011 through 2014). Target and objectives of KKN PPM program are as follows:

- a. Empowering students to participate acquiring knowledge pioneering integrated farming in the village Glagaharum, Porong subdistrict, Sidoarjo Regency
Target: The creation of a synergic cooperation between participants KKN PPM students and between students and the local community.
Goal: All of the students participating in service learning.
- b. Enhancing empowerment of farming communities in the development of animal husbandry, fisheries and organic vegetables.

Target: creation of public awareness of farmers on integrated agriculture (animal-vegetable-fish)
Goal: Members Farmers.

- c. Held a training cadre and members of farmers farming village Glaagaharum as a manager of integrated farming (livestock-fish-vegetable).
Target: The creation of a skilled and competent people in the planning and practice of integrated farming farm production.
Goal: Members Farmers / Gapoktan
- d. Empowerment program successful farmer groups / Gapoktan village Galagaharum Porong Sidoarjo.
Target: Establishment of Farmers Group agricultural organizations a complete integrated administration and able to benefit the community.
Goal: Member of Farmer / Gapoktan.
- e. Providing extension / training management and environmental sanitation especially clean water.
Target: The implementation of training activities and the establishment of environmental cadres
Goal: Mothers PKK and members of the youth village Galagaharum.

METHOD OF EXECUTION

1. Preparation and Debriefing

KKN-PPM implementation of activities, beginning with the planning program by conducting field surveys and interviews to villagers Galagaharum on potential and existing problems in the local village. Of potential and existing problems, the planned programs to explore the potential and solve the problems of the local village. Implementation of programs KKN PPM will be performed by a team KKN-PPM. For the evaluation, before and after KKN-PPM is implemented, there will be a questionnaire as a parameter of success of the programs that have been implemented.

The next activity is the recruitment of prospective students, as well as debriefing KKN PPM activities for participating students, which includes a variety of briefing material, namely:

- a. Tutorial to KKN participants for 2 days, every second sub-program is done every day (before the program)
- b. Demonstrating the use of tools, demonstration plots in accordance with sub-program students
- c. Materials provided include;
 - 1) Knowledge of the development of integrated farming systems based on livestock, fish and vegetables.
 - 2) organic vegetable cultivation technology

- 3) Technology raising goats Etawa
- 4) seedling cultivation technology / catfish
- 5) post-harvest processing and product packaging techniques.
- 6) management and marketing of farm products.
- 7) education/training management and environmental sanitation

2. Implementation

Implementation of programs KKN-PPM that has been planned to be carried out with the active participation of rural communities Galagaharum, Porong sub-district, Sidoarjo regency. Here are the programs of KKN PPM will be implemented

Table 1. Activity Program Plan KKN-PPM

No	Work name	Program
1.	Integrated Farming	a. Socialization integrated farming b. Understanding of integrated farming c. Election program on integrated farming
2.	Organic agriculture	a. Socialization of production of organic vegetable farming scheme a. Socialization organic vegetables b. Education / training of organic fertilizers and vegetable pesticides c. Training the use of tools TTG production of organic fertilizer and pesticide plant d. Training packaging of organic vegetables to increase the selling value. e. Training in business management and marketing of organic products marketing
3.	Farming Etawa	a. Socialization goats Etawa b. Training manufacture Etawa cage. c. Training goat rearing Etawa d. Marketing goat Etawa
4.	catfish breeding / seed catfish	a. Socialization cultivation of seedlings / fish catfish b. Training manufacture fish pond tarp models dipekarangan c. Fish pond maintenance training models tarp dipekarangan d. Marketing seed / fish catfish
5.	Post-harvest processing and product packaging techniques	a. Processing Training catfish into processed food products. b. Packaging / packaging of organic vegetables and processed products lele
6.	Farm management and product marketing.	a. Extension farm management. b. Training entrepreneurship (entrepreneurship) c. Extension marketing strategies for elementary students.
7.	Education environment	a. Extension of environmental sanitation b. Training simple water treatment c. Benefits counseling plant pollutants.

RESULTS AND DISCUSSION

Integrated Farming

Socialization of Integrated Farming System was conducted on July 19, 2016 held at the village hall Glagah Arum, Porong Sidoarjo. In this socialization was attended by 128 people from 16 representatives of RT, RT represented respectively 8.

Almost all people who follow an integrated agricultural socialization is not yet fully understand about Integrated Farming. In the question and answer session, many people who do not understand integrated agriculture and what it can do integrated agricultural program by utilizing their yards.

Selection of programs in integrated farming systems include farming, fishing, and the cultivation of organic vegetables. The location is an integrated agricultural program utilizes Glagaharum yard area residents, district Porong, Sidoarjo regency.

The development of cropping and livestock in their yards can be seen in (Table 2). After these activities take place, the number of integrated plants are plants with fish by 25.40% from the prior activities and after the intervention ended. This indicates that the villagers Glagaharum already feel the benefits of their integrated farming that is already implemented in their respective farms.

Integrated farming system in the village of Glagaharum seen from Table 2, where the majority of farm households (60,50%) already integrate crops and livestock or fish in their home gardens.

Table 2. Integrated Farming System in Glagaharum village, Porong sub-district, district. Sidoarjo..

land	Percentage
Crop + livestock + fish	60,50
Plants + fish	25,40
Plants are not integrated	4,10

Organic Agriculture.

a. Socialization Organic Farming

Socialization organic farming was done on July 20, 2016 in the village hall Glagaharum, Porong sub-district, Sidoarjo regency. Attended by representatives of the residents and students of KKN PPM a number of 75 people. There are so many people interested in the utilization of the yard with cultivation of organic vegetables in a polybag. Many of the questions posed by citizens in relation to how the cultivation of organic vegetables and organic vegetable farming pa advantage.

On that occasion delivered added value when the cultivation of vegetables is done in an organic way. Then on it was also on display showcase organic vegetables are already packaged well

b. Organic Vegetable Cultivation in Courtyard

Cultivation of organic vegetables in the yard in the village Glagah arum, carried in the beds and in the polybag. Types of organic vegetables grown mustard and chilli. The number of plants grown in polybags as a demonstration plot 100 polybag. Each polybags contains one plant.

Dipekarangan organic vegetable cultivation media preparation begins with the soil for cultivation of organic vegetables is a very important thing. Organic materials used for soil media mix of manure and straw.

Planting seeds of organic vegetables carried out after planting medium was prepared. From seed provided select healthy vegetable seedlings, planted in polybags and do maintenance every day.

Pemeliharaan conducted intensive crops include the provision of water, fertilizer and pest eradication. Fertilizer used is organic fertilizer / compost and manure, are not allowed to use chemical fertilizers. Organic fertilizer made at the time of making the planting medium to increase the volume of manure or compost more in the planting medium.

Eradication of pests and diseases can be done physically to kill or dispose of plant and growing media. Eradication of the disease can be made by spraying insecticide plant. Eradication bias also with vegetable isektisida. Vegetable insecticides can be made of extracts of neem leaf, tobacco, brotowali.

After this activity type and amount of vegetables planted increased significantly. Tanamam types of vegetables has increased very real.

Table 3. Mean Type Plant in Soil

Plants	Before	After implementation of (pilot project)
leaf vegetable	4	20
Vegetables Fruit / chili	3	20
Fruits	3	3
Crops	1	1
Medicinal plants	2	2
Annual plants and shrubs	15	15

Farming Etawa

a. Socialization

Socialization program Etawa raising goats held on July 30, 2016 which dihadiri 110 orng of representatives from each region RT After socializing Glagaharum and Students KKN PPM. At socialization were imported extension of R & D Ranch Grati Pasuruan, Ir. Sugiani.

b. Training manufacture Etawa cage.

After socializing Glagaharum village, Porong sub-district, Sidoarjo regency receive mentoring manufacture good cage for raising goats Etawa. Raising goats Etawa not been done villagers Glagaharum. After this event the citizens are interested in raising goats Etawa. Goats were used as a demonstration plot berjumlah 5 male and female. Etawa raising goats is economically very profitable For easy maintenance, has a high price.

c. Maintenance Training Etawa.

Etawa goat feed forage naturally sourced from natural plants and concentrate. While salt is a mineral source.

How to prepare mineral Award bamboo segments with a length of 40-50 cm, then peel the outer skin. Small holes in the bottom. Put salt or mineral so into the joints of bamboo to the brim. Enter approximately half a glass of water into the joints of bamboo that has been filled with salt or mineral. Hang bamboo wall cage. Water drink can be provided with a bucket or a clean place and given the time of day

As for the cultivated cages facing east. The materials used must be robust, inexpensive and readily available at the location. Cages made stilts and roofed with where food and drink. Enclosure wall must have ventilation (vent) in order to better air circulation

Table 4. Average Type Livestock Each family in the village Glagaharum yard

Plant	Before	After the implementation of (pilot project)
Chicken	9	9
Cow	2	2
Sheep	1	1
Etawa	-	5

Cultivation Seeds / fish catfish

a. Socialization Raising catfish

The socialization of catfish farming is done on July 20, 2016 housed the village hall Glagaharum, Porong sub-district, Sidoarjo regency, attended by representatives of the residents of RT 16 125 people and students of KKN-PPM. In the socialization was delivered utilization of the yard for catfish with an inexpensive and simple tarpaulin. Calculation nilain economical and benefits are also extended to the citizens.

b. Making Training Swimming Sheeting

Making the pool tarp done together citizens Glagaharum, Porong sub-district, Sidoarjo regency The materials used in this training include Bamboo sheeting, and the pipe for plumbing.

c. Maintenance training catfish

Pisciculture lel in the pool tarp must consider several things:

1). Setting water quality

Water color is best for catfish in green indicates that the water quality is good for catfish. Lele did not like the clear water. And the water will turn red typing adult fish to be ready for harvest

2). The water depth

The pool should not be too shallow due to evaporation will make the fish become too hot

3). The level of water clarity

Basically catfish do not like clear water. It can be seen from the nature and shape of her body

4). woof

Feed is conducted three times a day at 07:00 am, 17:00 and 22:00. The food does not always have to be three times a day, it could be four times, depending on the needs of the fish will eat.

In the process of aquaculture feed is given using a type of fish sentrat 781-1 because it contains nutrients in fish need a minimum of 35% protein, 10-16% fat, 15-25% carbohydrates, vitamins and minerals.

5). Pengedalian pest

Pests and diseases can not be underestimated because it affects both the volume of

production. and the success rate in fish farming. Pests usually animals beaver, fish-eating birds, cats, etc. As for diseases such as viruses and bacteria.

Prevention is by using some sort of barrier so that no wild animal into the pond and eat seeds catfish. For the disease may be given medicines are widely available in stores fishery, depending on the type of disease that infect catfish.

Pretty much Glagaharum villagers who utilize most home gardens for catfish pond. From an existing catfish, the average household catfish farmers can harvest as much as 2-3 times a year. Results catfish can be sold at between Rp 12,000 to Rp 14,000 -until, - depending on the results of existing catfish. In addition to a sale, a fish pond that is able to meet the nutritional needs of the family so that the family food security are met.

Post-Harvest Processing and Packaging Engineering Products

Post-harvest processing is planned date of August 11, 2016 held at village hall Glagaharum, Porong subdistrict, Sidoarjo regency. Plan activities to be carried out is the packaging of organic agricultural products and the manufacture of processed catfish. Target training is a citizen Glagaharum, excl. Porong, Kab. Sidoarjo.

Post-harvest processing of catfish can be a result of increase the sale value and manmbah penghasilan Glagaharum villagers. Catfish processed into catfish nuggets that have a higher sale value than if only sold as catfish. With attractive packaging will facilitate marketing. Packaging of agricultural products especially organic vegetables will increase the value of the selling price of these vegetables. The sale value can reach three times the vegetables without a packaged good.

Farm Management and Product Marketing

Extension of Farm Management and Product Marketing will be held on August 11, 2016. The goal of training is Glagaharum village, Porong subdistrict, Sidoarjo regency. Counseling focused on how to market a product with the diversification of products and product packaging that attract so easily marketed at a better price.

Environmental education

Counseling on environmental sanitation was held on August 30, 2016 held at the village hall

Glagaharum, Porong subdistrict, Sidoarjo regency.. Number who attended the event 98 people. On this occasion exhibited a simple display of the water treatment. And on the next opportunity will be created in the scale household water purification simple way. Besides, kerjabakti related to environmental hygiene is already done.

CONCLUSIONS

KKN PPM program of community empowerment Glagaharum village, Porong sub-district, Sidoarjo regency have a good dampat against potential economic improvement of society.